submitted the required certified copies with this response. As such, Applicant's priority date is perfected to February 1, 1999.

II. Claim Objections

The Office objects to claims 5-9 and 11-22 as being multiply dependent claims that depend from another multiply dependent claim. To expedite prosecution, claims 5-9 have been amended, claims 11-22 have been cancelled, and new claims 23-62 have been added to remove any improper multiple dependencies. In light of the claim amendments and additions, reconsideration and withdrawal of this objection is respectfully requested.

III. Rejections under 35 U.S.C. § 101

The Office rejects claims 11-22 as allegedly reciting a use without setting forth any steps involved in the process in violation of 35 U.S.C. § 101. To expedite prosecution, claims 11-22 have been cancelled and new claims 50-62 have been added. In light of the new and cancelled claims, reconsideration and withdrawal of this rejection is respectfully requested.

IV. Rejections under 35 U.S.C. § 112, second paragraph

The Office rejects claims 11-22 as allegedly indefinite under 35 U.S.C. § 112, second paragraph, because the claims allegedly provide for the use of sebocytes without setting forth any steps involved in the method or process. This rejection is respectfully traversed in light of the new and cancelled claims. To expedite prosecution, claims 11-22 have been cancelled and new claims 50-62 have been added. As new claims 50-62 are method claims which set forth the proper steps involved in the method, reconsideration and withdrawal of this rejection is respectfully requested.

V. Rejections under 35 U.S.C. § 112, first paragraph

The Office rejects claim 10 as allegedly failing to meet the written description requirement of 35 U.S.C. § 112, first paragraph, as to the claimed cell line. This rejection is respectfully traversed. However, in order to expedite prosecution, Applicant has submitted a copy of the recognition of the deposit of microorganisms under the Budapest Treaty and the Declaration of the Applicant, Dr. Christos C. Zouboulis, stating that the cell line has been deposited under the Budapest Treaty and that all restrictions imposed by the depositor will be irrevocably removed upon the granting of a patent. Thus, reconsideration and withdrawal of the rejection of claim 10 under 35 U.S.C. § 112, first paragraph, is respectfully requested.

VI. Rejections under 35 U.S.C. § 102

a. Zouboulis et al.

The Office rejects claims 1-4 and 10 under 35 U.S.C. § 102(a), § 102(b), and § 102(f) as allegedly anticipated by Zouboulis et al. This rejection is respectfully traversed. The Zouboulis et al. article was published in December 1999. Applicant has filed a certified copy of the applications to which he is claiming priority as required by 35 U.S.C. § 119(b). As such, Applicant's priority date is perfected to February 1, 1999. Because Applicant's priority date is prior to the publication date of Zouboulis et al., Zouboulis et al. is not prior art and the rejection of claims 1-4 and 10 under 35 U.S.C. § 102(a), § 102(b), and § 102(f), cannot properly be sustained. Reconsideration and withdrawal of this rejection is respectfully requested.

b. Akerblom et al.

The Office rejects claims 1 and 4 under 35 U.S.C. § 102(b) as allegedly anticipated by Akerblom et al. This rejection is respectfully traversed. The Akerblom patent issued on August 4, 1998. As detailed above, Applicant's priority date has been perfected to February 1, 1999.

Thus, the Akerblom patent does not satisfy the requirements of 35 U.S.C. § 102(b), as the Akerblom patent issued less than 1 year prior to Applicant's priority date of February 1, 1999, and the rejection is made moot.

The Office also rejects claims 1 and 4 under 35 U.S.C. § 102(a) and § 102(e) as allegedly anticipated by Akerblom et al. This rejection is respectfully traversed. The Akerblom patent allegedly discloses the existence of an immortalized adipocyte cell line. Applicant claims a sebocyte cell line. Applicant respectfully submits that adipocytes and sebocytes are completely different cell types, and, as such, the Akerblom patent does not teach or suggest the subject matter of Applicant's claims.

Adipocytes are highly differentiated fibroblasts which can be found throughout the whole body. In contrast, sebocytes are differentiated epithelial cells of the skin and are only located in the skin, not throughout the whole body. Moreover, not only do adipocytes and sebocytes have completely different origins, but sebocytes also produce specific lipids (e.g., squalene and wax esters), which cannot be synthesized by adipocytes. Sebocytes and adipocytes are responsible for completely different functions and diseases, i.e., obesity and cardiovascular diseases (adipocytes) or acne and seborrhea (sebocytes). Finally, it is relatively easy to transfect and immortalize adipocytes, but the transfection and immortalization of sebocytes is very difficult. Thus, the Akerblom patent's alleged disclosure of an immortalized adipocyte cell line does not teach or suggest the very different sebocyte cell line claimed by Applicant, and the rejection of claims 1 and 4 under 35 U.S.C. § 102(a) and § 102(e) in light of Akerblom should be withdrawn. Reconsideration and withdrawal of this rejection is respectfully requested.

VII. Rejections under 35 U.S.C. § 103(a)

The Office rejects claims 1-4 and 10 under 35 U.S.C. 103(a) as allegedly made obvious in light of Zouboulis et al. or Rosenfield et al., in view of Bryan. This rejection is respectfully traversed. As set forth above, Applicant's priority date has been perfected to February 1, 1999. The Zouboulis article published in December 1999. The Rosenfield patent issued December 21, 1999. The perfection of Applicant's priority date to February 1, 1999, as detailed above, removes both the Zouboulis and Rosenfield documents from consideration as prior art. Although the Bryan article published in 1994, the article only discloses the use of SV40 to immortalize cells in culture generally, and does not so much as mention an immortalized sebocyte cell line. As such, the Bryan article alone does not teach or suggest the subject matter of Applicant's invention. Accordingly, the rejection of claims 1-4 and 10 under 35 U.S.C. 103(a) in light of Zouboulis et al. or Rosenfield et al., in view of Bryan, cannot properly be sustained and must be withdrawn. Reconsideration and withdrawal of this rejection is respectfully requested.

CONCLUSION

With entry of the above Amendment and in view of the foregoing remarks, it is respectfully submitted that claims 1-10 and 23-62 are in condition for allowance.

None of Applicant's amendments are to be construed as dedicating any such subject matter to the public, and Applicant reserves all rights to pursue any such subject matter in this or a related patent application.

Also submitted below, on a separate page titled "Version with Marking to Show Changes Made to the Claims," is a marked-up copy of prior pending claims. It is respectfully submitted in view of the foregoing Amendment and remarks that all of the objections and rejections in the Office Action dated September 12, 2002, have been overcome and should be withdrawn.

Applicant respectfully requests early and favorable notification to that effect. The Examiner is encouraged to contact the undersigned with any questions or to otherwise expedite prosecution.

Respectfully submitted,

Dated February 12, 2003

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Version with Marking to Show Changes Made to the Specification

On page 1 please insert the following section between the Title of the Invention and the Field of the Invention:

-- CROSS REFERENCE TO RELATED APPLICATIONS

This application claims priority to PCT/EP99/09988, filed December 15, 1999, and to German patent application 19903920.8 filed February 1, 1999, and such applications are hereby incorporated by reference in their entirety. --

Version with Marking to Show Changes Made to the Claims

1. (Amended) An immortalized sebocyte [Sebocytes which are immortalized and] derived from a human.

2. (Amended) The sebocyte [Sebocytes] according to claim 1, characterized in that it is [they are] derived from a human sebaceous gland cell.

3. (Amended) The sebocyte [Sebocytes] according to claim 2, characterized in that the sebaceous gland cell is a [cells are] facial sebaceous gland cell [cells].

4. (Amended) The sebocyte [Sebocytes] according to claim 1 [any of the preceding claims], characterized in that it is [they are] present in form of a cell line.

5. (Amended) The sebocyte [Sebocytes] according to claim 1 [any of the preceding claims], characterized in that it is [they are] immortalized by transfection of DNA.

6. (Amended) The sebocyte [Sebocytes] according to claim 1 [any of the preceding claims], characterized in that it expresses a [they express] SV-40 large T antigen.

7. (Amended) The sebocyte [Sebocytes] according to claim 1 [any of the preceding claims], characterized in that it exhibits [they exhibit] features of a normal, non-transfected and differentiating sebocyte [sebocytes].

8. (Amended) The sebocyte [Sebocytes] according to claim 1 [any of the preceding claims], characterized in that its [their] proliferation is modifiable by an androgen [androgens] and/or a retinoid [retinoids].

9. (Amended) The sebocyte [Sebocytes] according to claim 1 [any of the preceding claims], characterized in that it is [they are] cloned.

10. Human sebocyte cell line DSM ACC2383.

[11. Use of the sebocytes according to any of the claims 1 to 9, or the human sebocyte cell line according to claim 10 for diagnostic, therapeutic or cosmetic purposes.]

[12. Use of the sebocytes according to any of the claims 1 to 9 or the human sebocyte cell line according to claim 10 for the examination of the physiology or the pathophysiology of human or animal sebaceous gland.]

[13. Use of the sebocytes according to any of the claims 1 to 9 or the human sebocyte cell line according to claim 10 for the examination of the origin of acne and/or seborrhoe and/or other diseases.]

[14. Use of the sebocytes according to claim 13, wherein the other diseases to be examined are dermal diseases in which the sebaceous gland function is involved or may be involved.]

[15. Use of the sebocytes according to any of the claims 1 to 9 or the human sebocyte cell line according to claim 10 for the testing of anti-acne and/or anti-seborrhoe compounds or agents.]

[16. Use of the sebocytes according to any of claims 1 to 9 or the human sebocyte cell line according to claim 10 for the testing of compound or agents against diseases.]

[17. Use of the sebocytes according to claim 16, wherein the diseases are dermal diseases in which the sebaceous gland function is involved or may be involved.]

[18. Use of the sebocytes according to any of claims 1 to 9 or the human sebocyte cell line according to claim 10, for the development of simple or complex cell culture systems.]

[19. Use of the sebocytes according to any of claims 1 to 9 or the human sebocyte cell line according to claim 10 for the formation of or for the use in three-dimensional cell aggregations or constructions of organ-type structures.]

[20. Use of the sebocytes according to any of claims 1 to 9 or the human sebocyte cell line according to claim 10 for the preparation of products derived from said cells.]

[21. Use according to claim 20, wherein the cell products are lipids, plasmids, vectors, proteins which are expressed by said cells and/or DNA or RNA sequences of said proteins.]

[22. Use of the products obtained according to claim 20 or 21 for the modification of other cells or the modification of organisms.]

23. (New) The sebocyte according to claim 2, characterized in that it is present in form of a cell line.

24. (New) The sebocyte according to claim 2, characterized in that it is immortalized by transfection of DNA.

25. (New) The sebocyte according to claim 2, characterized in that it expresses a SV-40 large T antigen.

26. (New) The sebocyte according to claim 2, characterized in that it exhibits a feature of a normal, non-transfected and differentiating sebocyte.

27. (New) The sebocyte according to claim 2, characterized in that its proliferation is modifiable by an androgen and/or a retinoid.

28. (New) The sebocyte according to claim 2, characterized in that it is cloned.

29. (New) The sebocyte according to claim 3, characterized in that it is present in form of a cell line.

30. (New) The sebocyte according to claim 3, characterized in that it is immortalized by transfection of DNA.

31. (New) The sebocyte according to claim 3, characterized in that it expresses a SV-40 large T antigen.

32. (New) The sebocyte according to claim 3, characterized in that it exhibits a feature of a normal, non-transfected and differentiating sebocyte.

33. (New) The sebocyte according to claim 3, characterized in that its proliferation is modifiable by an androgen and/or a retinoid.

34. (New) The sebocyte according to claim 3, characterized in that it is cloned.

35. (New) The sebocyte according to claim 4, characterized in that it is immortalized by transfection of DNA.

36. (New) The sebocyte according to claim 4, characterized in that it expresses a SV-40 large T antigen.

37. (New) The sebocyte according to claim 4, characterized in that it exhibits a feature of a normal, non-transfected and differentiating sebocyte.

38. (New) The sebocyte according to claim 4, characterized in that its proliferation is modifiable by an androgen and/or a retinoid.

39. (New) The sebocyte according to claim 4, characterized in that it is cloned.

40. (New) The sebocyte according to claim 5, characterized in that it expresses a SV-40 large T antigen.

41. (New) The sebocyte according to claim 5, characterized in that it exhibits a feature of a normal, non-transfected and differentiating sebocyte.

42. (New) The sebocyte according to claim 5, characterized in that its proliferation is modifiable by an androgen and/or a retinoid.

43. (New) The sebocyte according to claim 5, characterized in that it is cloned.

44. (New) The sebocyte according to claim 6, characterized in that it exhibits a feature of a normal, non-transfected and differentiating sebocyte.

45. (New) The sebocyte according to claim 6, characterized in that its proliferation is modifiable by an androgen and/or a retinoid.

46. (New) The sebocyte according to claim 6, characterized in that it is cloned.

47. (New) The sebocyte according to claim 7, characterized in that its proliferation is modifiable by an androgen and/or retinoid.

48. (New) The sebocyte according to claim 7, characterized in that it is cloned.

49. (New) The sebocyte according to claim 8, characterized in that it is cloned.

50. (New) A method of diagnosis, treatment, or cosmetic enhancement, comprising: providing the sebocyte set forth in any of claims 1-9, 23-49, or the human sebocyte cell line according to claim 10, and using the sebocyte or the human sebocyte cell line for a diagnostic, therapeutic or cosmetic purpose.

51. (New) A method for examination of physiology or pathophysiology of a human or an animal sebaceous gland, comprising: providing the sebocyte set forth in any

of claims 1-9, 23-49, or the human sebocyte cell line according to claim 10, and using the sebocyte or the human sebocyte cell line for the examination of the physiology or the pathophysiology of the human or animal sebaceous gland.

52. (New) A method for examination of origin of acne and/or seborrhea and/or other disease, comprising: providing the sebocyte set forth in any of claims 1-9, 23-49, or the human sebocyte cell line according to claim 10, and using the sebocyte or the human sebocyte cell line for the examination of the origin of acne and/or seborrhea and/or other disease.

53. (New) The method according to claim 52, wherein the other disease to be examined is skin disease in which a sebaceous gland function is involved or may be involved.

54. (New) A method of for testing of an anti-acne and/or an anti-seborrhea compound or agent, comprising: providing the sebocyte set forth in any of claims 1-9, 23-49, or the human sebocyte cell line according to claim 10, and using the sebocyte or the human sebocyte cell line for the testing of the anti-acne and/or the anti-seborrhea compound or agent.

55. (New) A method for testing of a compound or an agent against a disease, comprising: providing the sebocyte set forth in any of claims 1-9, 23-49, or the human sebocyte cell line according to claim 10, and using the sebocyte or the human sebocyte cell line for the testing of the compound or the agent against the disease.

56. (New) The method according to claim 55, wherein the disease is a skin disease in which a sebaceous gland function is involved or may be involved.

57. (New) A method for development of a simple or a complex cell culture system, comprising: providing the sebocyte set forth in any of claims 1-9, 23-49, or the human sebocyte cell line according to claim 10, and using the sebocyte or the human sebocyte cell line for the development of the simple or the complex cell culture system.

58. (New) A method for formation of or for use in a three-dimensional cell aggregation or construction of an organ-type structure, comprising: providing the sebocyte set forth in any of claims 1-9, 23-49, or the human sebocyte cell line according to claim 10, and using the sebocyte or the human sebocyte cell line for the formation of or for the use in the three-dimensional cell aggregation or for the construction of the organ-type structure.

59. (New) A method for preparation of a cell product, comprising: providing the sebocyte set forth in any of claims 1-9, 23-49, or the human sebocyte cell line according to claim 10, and using the sebocyte or the human sebocyte cell line for the preparation of the cell product.

60. (New) The method according to claim 59, wherein the cell product is a lipid, a plasmid, a vector, or a protein which is expressed by the cell and/or a DNA or a RNA sequence of the protein.

61. (New) A method of using the product obtained according to claim 59 for modification of another cell or modification of an organism, comprising: obtaining the product and using the product to modify the other cell and/or the organism.

62. (New) A method of using the product obtained according to claim 60 for modification of another cell or modification of an organism, comprising: obtaining the product and using the product to modify the other cell and/or the organism.